



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE RELATION OF THE STATE UNIVERSITY TO RESEARCH WORK IN WAR TIMES

By Dr. R. W. THATCHER

UNIVERSITY OF MINNESOTA

A DEMOCRACY is not organized for war. Its aims are those of peace; its fundamental conceptions are those which can result only in peace. When, therefore, war is thrust upon it, a democracy must suddenly readjust itself to new and unexpected conditions. Under such an emergency, it is inevitable that every loyal citizen shall desire to do something to help. This desire manifests itself immediately in proffers of service to the government, and oftentimes in individual initiation of projects intended by the patriotic investigator to yield war-time results.

The first step which democracy must take in war times is to make its government supreme in authority. Freedom to criticize our elected officials is a privilege which seems to be very dear to many American citizens; not less dear is the privilege of employing one's own time and talents in whatever direction he chooses. But in war times, individual ideas and individual preferences must be surrendered to the public good. Successful prosecution of war can be accomplished only by coordinated effort. Coordination can be brought about only by centralized authority.

Modern warfare is essentially a conflict of intelligences. Each side endeavors to outwit the other by the production of new engines of war, of new agencies of destruction, of new plans for defense. All of these demand research of the highest skill, capable of most intense application and of quick and sure results. One of the most important lessons of the early days of the present war was that no nation can afford to sacrifice its scientific workers or break down its research agencies.

The universities, particularly those which have been built up by state and federal funds, are the agencies to which the government has the right to look for research assistance in winning the war. It is essential, therefore, that these universities do everything that they possibly can to maintain their research organization and facilities at the highest possible stage of efficiency. For that reason, I am urging that research

men in our universities be not stampeded by their own individual desires to do some unusual service in war times or by the public clamor for some special war-time effort. The most patriotic service which we can render is to be ready with our laboratories, our shops and our men equipped and working at their highest possible efficiency whenever the government calls upon us for the particular task which it assigns to us as our special part of the national plan.

It takes time for the government to elaborate its plan. Some of us are inclined to become impatient and to desire to turn immediately to some special war-time work. Many voluntary emergency organizations have been formed and hosts of suggestions have been proffered to government officials, doubtless resulting in hindrance if not in positive annoyance in the performance of their war-time duties. My suggestion is that we "sit tight" and perform our regular duties in the most efficient way possible until it becomes clearly apparent what special emergency service each one of us can render to the government.

The government has already organized its research council and its various departments for the prosecution of war-time work. The scientific men of the country and the various laboratories with their special facilities for research have been listed. This constitutes research mobilization. There must necessarily intervene a period during which some units can only "stand and wait" while the general plan of attack is being formulated. If it falls to our lot to wait a little before our particular task is assigned to us, let us not stand idle, but rather keep our equipment well polished and efficient by constant use. It may be that some of us can actually evolve new war-time plans for research which we can pass on to the proper government officials through the National Research Council; but until we are quite sure that our ideas are worth while and likely to serve a national need, let us keep patiently at our regular research problems. We shall then be in position to turn quickly to any emergency task which the government may assign to us on the basis of the work which it knows we are already doing.

Not less important is the careful and thorough training of the young men in our institutions who have not yet been called into federal service. The making of a skilled research worker is a long-time process at best, and we ought at this time to increase rather than decrease our research teaching and, if possible, to speed it up by concentrated work.

Again, while the winning of the war is our present all-ab-

sorbing task, we look forward with confidence to the time when the world has been made "safe for democracy." The necessary reconstruction of our national industry to meet the needs of world food supplies and world industries, as well as to meet the competition of other nations whose skilled energies have been turned to peaceful pursuits, will demand that American men of science be ready, as they have never been before, to match their research skill against that of the whole world. This means constant maintenance of all our research agencies and organizations at their highest efficiency.

My advice and suggestion to individual research workers is, therefore, that we hold ourselves in readiness to undertake any task for which the proper officers of the government call upon us, as the research workers best prepared to do that particular task; but that until that special task is assigned to us, we keep steadily and conscientiously at our regular research work as our highest patriotic duty in these war times.

Turning now to the question of the attitude of the university administration toward research, I should like to say that, in my opinion, the lesson of the war ought to result in a recognition of the rapidly increasing value to the public of state-supported research work. State and federal money has been appropriated in the past for agricultural experiment stations, and more recently for mines experiment stations, and a proposition for engineering experiment stations is under consideration. But the pressure upon these institutions for popular instruction or demonstrations of what is already known of methods of scientific operation of farms or industrial plants has often seriously hindered the development of real fundamental research work. I am not arguing now for better support for that type of research which is characterized by the "seeking after truth for truth's sake," worthy as that may be; but rather for the necessary fundamental research which must be the basis for future industrial development.

Great industrial corporations and various institutions or "foundations" of a semi-public and semi-philanthropic character have recently come to recognize the value of research to the development of the particular industry or cause which they represent. But the general public, as represented by the state legislatures or other public agencies which appropriate public money for specific uses, have been and are still loth to recognize the value to the public of a skilled research scientist. As a result, we have numerous and embarrassing examples of the loss to our universities of many of their most promising re-

search men by reason of too tempting offers of larger salaries by industrial corporations or other agencies such as those I have mentioned.

I believe that the public should be entitled to the results of scientific researches of the most skilful kind, and that the benefit of such work ought not to be limited to private use or available only to private gain. For that reason, I feel strongly that our universities, and the public agencies which provide the funds with which they are to operate, ought to recognize the immense value to the general public of the unselfish service which the research men of our university staffs are rendering, but which they can not be expected to continue to give to the public if they are continually offered higher salaries and better facilities for work in privately supported or endowed laboratories. Such recognition should have come even if the war had not intervened; but it is doubly due now that the war-time emergency and the necessities of reconstruction work after the war have so emphasized the necessity for and the value of scientific research work.